

REMARKS

Claims 1, 4, and 5 remain in the application. Claims 2, 3, 6, and 7 have been cancelled.

First, Applicant wishes to extend his appreciation for the telephone interview with the Examiner on August 1, 2007. In furtherance to the interview, it was agreed that Hayashi does not disclose a lancing operation that does not leave the second surface of the workpiece with a continuous and uninterrupted surface. The Examiner also agreed to withdraw the rejection of claim 1 and its dependent claims upon suitable argument and/or amendment.

In the present outstanding Office Action, claim 4 stands rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. More specifically, the Examiner notes there is no disclosure in the specification, as originally filed, that the raised peripheral edge has a thickness of .007 inches. In response, Applicant has amended claim 4 to correctly state that the raised peripheral edge has a height of .007 inches, as disclosed at paragraph 14 of the specification.

Additionally, claim 1 was rejected under 35 USC 103(a) as being unpatentable over Takasago et al. in Japan Patent Document No. 2001-162,387 in view of Hayashi in US Patent No. 5,284,043. The Examiner states that Takasago et al. discloses providing coated sheets of metal, punching at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge, and applying a laser beam wherein the gases produced during the forming of the weld escape via the at least one embossment. However, Takasago et al. does not teach using a lance to form the embossments. The Examiner also states that Hayashi teaches forming a protrusion by embossing or lancing.

In response, Applicant respectfully traverses the rejection. Claim 1 of Applicant's invention sets forth a method of laser welding a plurality of coated metal sheets comprising the steps of: providing coated sheets of metal having opposing first and second surfaces; creating a raised region on at least one of the coated sheets, the raised region formed on the first surface by lancing at least one embossment on at least one coated metal sheet, the embossment comprising a

depression having a raised peripheral edge, and wherein the second surface remains continuous and uninterrupted; juxtaposing the coated sheets to introduce a gap therebetween, the gap defined by the raised region; and applying a laser beam forming a laser weld wherein gases produced during the forming of the laser weld escape via the gap.

Takasago et al. does not disclose the step of forming a raised region on at least one of the coated sheets by lancing at least one embossment in the first surface of the coated metal sheets. Rather, Takasago only discloses pressing a portion of the metal sheet with a punch (17) to form a rounded depression in the sheet and an annular built-up zone (15) surrounding the depression. The punch (17) requires a press (23) to support the opposing side of the metal plate while forming the rounded depression therein.

The step as set forth in Applicant's invention defined in claim 1 includes lancing at least one embossment in the first surface of the coated metal sheet. That is, the lancing actually pierces a hole in the first surface of the metal sheet while also forming the raised peripheral edge therearound. Further, the lancing step does not require the use of a press to support the opposite side of the metal sheet wherein the second surface remains continuous and uninterrupted by the lancing of the embossments. The lancing requires significantly less force to form the embossment in the metal sheet and also less manufacturing equipment.

Hayashi teaches lancing a piece of sheet metal, however, the lancing disclosed in Hayashi cuts or pierces completely through the first and second surfaces of the metal sheet. As shown in Figures 16, a pair of punch and die tools 33c, 53c are required to support the metal sheet W while the lancing step cuts completely through the metal sheet to form a protrusion Pl. In contradistinction, in Applicant's invention as set forth in claim 1, the raised region is formed on the first surface of the metal sheet by lancing at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge, and wherein the second surface remains continuous and uninterrupted. That is, the metal sheet is only partially cut or lanced, into the first surface. The lancing is stopped short of or spaced from the second surface so as to maintain a continuous and uninterrupted second surface in the metal sheet. The material displaced from the lancing of only the first surface forms the raised

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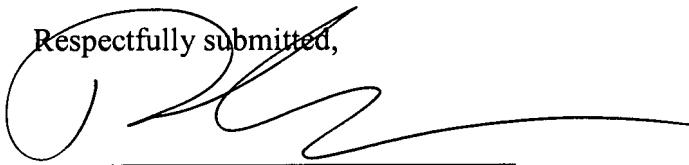
region around the embossment. Also, the lancing of only the first surface eliminates the need for die tools to support the first and second surface to facilitate a lancing operation completely through the metal sheet as in Hayashi.

Therefore, neither Yakasago et al. nor Hayashi taken either alone or in combination teach the method of forming a depression in the metal sheet as defined in claim 1 of Applicant's invention. Applicant respectfully request confirmation of the withdrawal of the rejection to claim 1 and dependent claims 4 and 5.

Finally, claims 3, 6, and 7 stand rejected under 35 USC 103(a) as being unpatentable over various references cited by the Examiner. In response, Applicant has cancelled claims 3, 6 and 7, rendering the rejection moot.

Accordingly, it is believed that the application is in condition for immediate allowance and Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Should the Examiner have any questions regarding the response to this Office Action, the Examiner is invited to contact the undersigned attorney for the applicant.

The Commissioner is hereby authorized to charge any underpayment or credit any overpayment of the above fees associated with this Communication to Deposit Account No. 50-1759.

Respectfully submitted,


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